

Rethinking the use of C2 methods for small states facing an adversary with superior resources.

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The Main focus of this C2 paper is the discussion of how a small State with limited military capabilities can regain the initiative from an attacking regional military power with superior resources. The theoretical starting point is based on modern military theory that describes the new generation of warfare as well as a discussion on readmission on initiatives relating to operational management based on C2 research at the National Defence University in Stockholm. The work ends with a discussion on essential areas of knowledge management and scientific approaches in the ongoing management of C2 research.

Initially the contemporary theory of the new-generation warfare with particular interest in strategic objectives, capabilities and vulnerabilities is described. Russian emphasis on the initial phase of operations as a precondition for operating success, choice of control efforts and prioritization of strategic targets are shown special attention. In modern military theory the changing quality in military objectives, means and methods is of high importance. The current operational means are supported by new technologies and applied sciences. In military affairs could the use of new knowledge and practical experiences give decisive advantages against an opponent who lacks these capabilities.¹

Offensive operations, “maskirovka” (deception) and surprise have always been important in Russian military thinking. Operational art includes objectives, actions, resources, as well as calculated risks. Operational planning uses elements of operational design to show the operation's implementation that has been carried out in advance. In short, the adversary has the initiative and will make every effort to maintain it, but how can the smaller nation defend and take back the initiative against an opponent that conducts parallel warfare on strategic vulnerabilities? What options at the operational level are possible and necessary if to create robust and redundant methods and processes in order to take back the initiative?

The offensive superior adversary assume to reach decisive operational conditions within the first 24 hours (the operation will take a few weeks to complete but the essential operational outcome will evolve within the first 24 hours) and the superior adversary will direct its resources towards prioritized strategic objectives. The opponent will use all available resources at all commands levels, military as well as civilian. Lines of operations will be massive in space and time: space-and air forces, naval forces, strategic strike aviation and transport aviation, missile forces, Special Forces and intelligence units. Civil advocacy agents and Special Forces are expected to act in the depths of the operational environment.²

Targeting depends on the strategic end state, what simply must be achieved within the military operation. The end state could be a positive behaviour toward the superior adversary, and of most importance a comprehensive support for the adversary national interests. Strategic objectives can be immediate neutralization of both vital military infrastructure and vital civilian infrastructure. The purpose of this is to

¹ Chekinov, S. G. & Bognanov, S. A. ‘The Nature and Content of a New-Generation War’. *Military Thought*, No. 4, 2013, p. 12-23.

² Chekinov, S. G. & Bogdanov, S. A. 2014. ‘Initial Periods of Wars and Their Impact on a Country’s Preparations for a Future War’. *Military Thought*, No.1, 2014.

demonstrate to national and regional political and military leadership that the nation initially has been deprived of its most important capabilities to protect, manage and maintain stability in the country.

The superior opponent's aggressive ambitions and military readiness affects the smaller nation by its surprise, concentration on forces, and his ability to predict the effectiveness the strategic synergies in selected directions. The political leadership is the primary target, can be confronted directly and indirectly. Indirect action is aimed against the population to change their behaviour in a wishful way by the degradation of the society's vital societal functions such as power supply, water and sanitation, health care, communications and transports.

Vital military targets are not difficult to predict. Important command posts, air and naval bases, logistics centres, sensors in the air, at sea and on land would be effected. Even civilian command posts at national and regional level can be neutralized. The opponent will destroy as little infrastructure as possible, but may use restricted weapons based on new scientific principles as: acoustic, electromagnetic, chemical, biological, genetic, laser and radiation weapons. These weapons are considered to provide positive psychological effects even at minimal use. This special use of these weapons needs a thorough risk assessment at all levels.³

All the effects above affect all command levels to a certain degree. Since one of our conclusions above is that the strategic level will be targeted early in a conflict, the C2 methods of lower levels requires special attention in order to handle the conflict. In the discussion below, we have therefore focused on the operative level, but many of the proposals are probably valid also for the tactical level.

One of the dominant research issues in C2 to handle a large variety in the opponent's tools deals with the concept of agility [ref1], which is seen as the capability to adapt the C2 approach according to the circumstances. This means according to the authors, e.g., those simple, decomposable problems can be handled with a centralized C2 approach; while a complex situation requires a de-centralized approach they call edge C2. The idea is that edge C2 enables the entities in the mission to quickly react to changes in local circumstances without having understood the whole global picture, while a more centralized approach is slower to react in this case. A mature C2 system is capable to vary the C2 approach between these two extremes according to what is required by the situation.

The idea that C2 needs to be faster than today due to a rapidly changing environment is valid also for the case outlined previously in this paper with a small state facing a superior opponent, but in this case the changing environment can be caused by e.g. information warfare, comprehensive warfare with civilian actors, and the use of Special Forces. However, the conclusions drawn in⁴ [ref1] and the following works of the NATO SAS working groups in this field are based on the assumption that the endeavour includes large enough resources to solve the situation at hand. For a small country facing a strong adversary this will not be the case, and therefore C2 agility needs to be complemented by other methods to be able to react to rapidly changing circumstances and to be able to surprise the opponent. In this work, we propose a conscious variation in the use of methods in the C2 process as a way to better handle rapidly changing circumstances and to be able to take the initiative even when facing a superior opponent. These methods also put a high demand on adaptive data collection.

³ Gerasimov, V. 2013. 'The Value of Science is in the Foresight: New Challenges Demand Rethinking the Forms and Methods of Carrying Out Combat Operations', *Voyenno-Promyshlennyy Kuryer* Online, 26 February 2013.

⁴ NATO NEC C2 Maturity Model, SAS-065, eds David S. Alberts, Reiner Huber, and James Moffat, CCRP Publication Series, 2010.

In order to design a C2 system (organization, methods, mandate, technology, personnel,), it is necessary to know how C2 is affected by variations in the design in different circumstances. In this work, we discuss the consequences of varying the properties of a limited number of C2 methods used in COPD and under what circumstances they should be varied. We argue that it may be beneficial to:

- Vary the time horizon of the plans. A long time horizon is beneficial when the whole mission is considered, but a shorter time horizon makes the planners more agile in terms of reacting to changing circumstances.
- Vary the focus of the assessment process. The current assessment methodology (COPD) focuses on assessing the outcome and consequences for the plan, while in a rapidly changing environment there is a need to complement the focus on assessing the plan with a larger emphasis on the environment.
- The command concept needs to be adaptable to allow for collaboration with civilian authorities. This includes the capability to react to information warfare. In this case also legislative issues also need to be addressed.
- The operative level needs to be able to operate during the whole operation without input from the strategic level since we can assume that the strategic level will be an early target in an attack. Likewise, the operative level very early needs to give the tactical level directions so they can work independently for a long time period. This requires new capabilities of both quick planning and of assessing the situation at a high (\leq strategic) level.

Conclusions

In the new generation of warfare is the main strategic objective the political and military leadership. The methods to neutralize or the impact on these targets are a mix of mainly asymmetric and indirect methods. High tech communication technologies, long range precision weapons and weapons based on new physical principles. To achieve initiative the adversary will attack strategic vulnerabilities civilian as well as military targets. This kind of strategic attack will initially paralyze the nation and the military because the control functions of the state will be mainly or partly neutralized, and some of them eventually wiped out.

These effects put high demands on the command levels below the strategic level, and in this paper we discuss how the C2 methods of the operative level can be adapted to handle the rapidly varying environment under these circumstances. In the scenario of a small state facing a superior opponent using the new generation warfare, the current focus of research on C2 agility for large endeavours needs to be complemented with research on how different methods used in the C2 process can be varied in order to better meet the requirements of varying circumstances in the environment. We propose that further research is made in this area to better understand how C2 methods can be efficiently adapted to the needs of smaller states.